

ABSTRACT

A system and method are disclosed for handling devices that assert a wake-up signal in an improper fashion. It is observed that any wake-up signals that remain asserted as the computer system enters a low-power mode are likely produced by non-compliant cards, and to assure proper functioning of the system, it is desirable for the computer system to selectively block assertion of asserted signals from non-compliant cards. In one embodiment the computer system includes an expansion bus coupled to a bus bridge, and a signal gate. The expansion bus includes a wake-up signal that the signal gate can be configured to isolate from the bus bridge. The signal gate is preferably controlled by the power management controller. The power management controller sets the signal gate to isolate the signal from the bus bridge if the controller determines that wake-up signal is being driven in a non-standard manner. The non-compliance may be determined by: (a) detecting a transition of the computer to a reduced power state; (b) pausing for a predetermined delay; and (c) sampling the wake-up signal to identify any asserted wake-up signals. In the presence of non-compliant expansion cards, the disclosed embodiments may advantageously assure correct operation of the system with minimal additional cost.